

REMARKS

The amendment to the Specification merely adds a specific claim of priority to the priority document to the present International Application, U.S. Provisional Application 60/146,270, as required under 35 U.S.C. 119(e)(1).

The amendment to Claim 6 and new Claims 7 and 8 are merely mechanical amendments to eliminate the multiple dependency of the original claims.

Original Claims 1-5 have been amended to disclaim compounds where A is homopiperazine. Support therefore is found throughout the specification and particularly at page 8, line 18.

New Claims 9-17 more particularly point out and distinctly claim the subject matter Applicants regard as their invention. No new matter is added to the specification.

New Claims 9 and 10 are drawn to another preferred method of treatment using the presently claimed novel compounds, and finds support throughout the specification and specifically at page 4, lines 5-20; especially lines 15-16.

New Claims 11-17 are drawn to various preferred embodiments of the inventive family of compounds and are supported throughout the specification, and especially as follows:

New Claim 11, see page 8, lines 19-20;

New Claim 12, see page 8, line 23-24;

New Claim 13, see page 8, line 3-5, 8-10, and 13;

New Claim 14, see page 10, lines 6 and 13; and example 29;

New Claim 15, see example 94;

New Claim 16, see page 10, lines 6, 14, 17-18, and example 70;

New Claim 17, see page 10, lines 14-16, and examples 26 and 27.

A mark-up copy of Claims 1-6 showing the changes made in this present amendment is enclosed on separate sheets as required by 37 C.R.F. 1.121. A clean copy of the entire claim set as amended herewith is also enclosed for the Examiner's

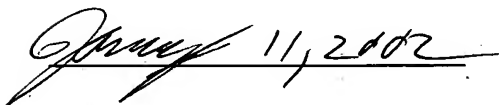
convenience. Entry of the forgoing amendments prior to substantive examination is respectfully requested.

Respectfully submitted,



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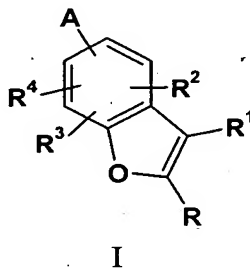
Eli Lilly and Company
Patent Division/DC1104
Lilly Corporate Center
Indianapolis, Indiana 46285



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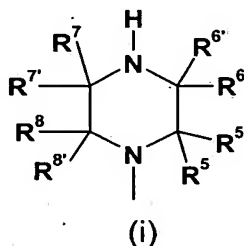
MARKED-UP COPY OF AMENDED CLAIMS

1. (Amended) The compounds of Formula I:



where:

A is [homopiperazine or] a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

$R^{6'}$ is hydrogen or methyl, provided that $R^{6'}$ may be methyl only when R^6 is other than hydrogen; or R^6 and $R^{6'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^7 is hydrogen or methyl, provided that $R^{7'}$ may be methyl only when R^7 is other than hydrogen; or R^7 and $R^{7'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

$R^{8'}$ is hydrogen or methyl, provided that $R^{8'}$ may be methyl only when R^8 is other than hydrogen; or R^8 and $R^{8'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^9 is C_1 - C_8 alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C_1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

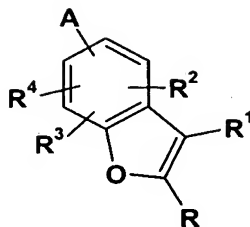
1. R is halo;
2. R^1 is halo or phenyl
3. $R^{6'}$ or $R^{7'}$ is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R, R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

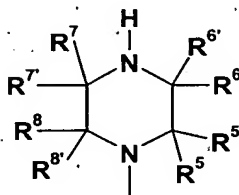
2. (Amended) A pharmaceutical formulation which comprises, in association with a pharmaceutically acceptable carrier, diluent or excipient, a compound of Formula I:



I

where:

A is [homopiperazine or] a piperazine of formula:



(I)

R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^8 is hydrogen or methyl, provided that R^8 may be methyl only when R^8 is other than hydrogen; or R^8 and R^8 , together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^9 is C_1 - C_8 alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;
or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C_1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

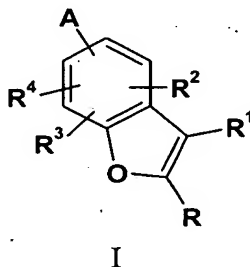
1. R is halo;
2. R^1 is halo or phenyl
3. R^6 or R^7 is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

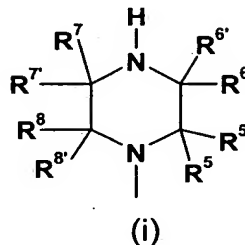
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

3. (Amended) A method for increasing activation of the 5-HT_{2C} receptor in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compounds of Formula I:



where:

A is [homopiperazine or] a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C^1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

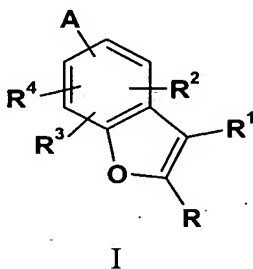
1. R is halo;
2. R^1 is halo or phenyl
3. R^6 or R^7 is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

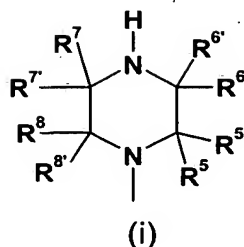
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

4. (Amended) A method for the treatment of obesity in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compound of Formula I:



where:

A is [homopiperazine or] a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C^1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

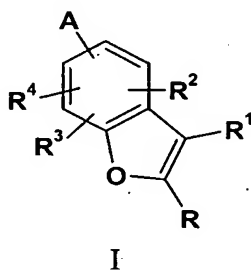
1. R is halo;
2. R^1 is halo or phenyl
3. R^6 or R^7 is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R, R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

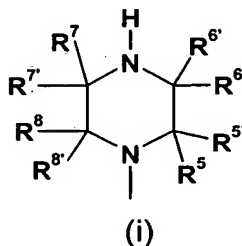
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

5. (Amended) A method for the treatment of depression in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compound of Formula I:



where:

A is [homopiperazine or] a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R², R³, and R⁴ are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C₁-C₄ alkoxy, or C₁-C₄ alkyl, neither R⁶ nor R⁷ may be selected from the group consisting of hydrogen and C₁-C₆ alkyl unless:

1. R is halo;
2. R¹ is halo or phenyl
3. R^{6'} or R^{7'} is methyl; or

4. R^5 or R^8 are other than hydrogen;

b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

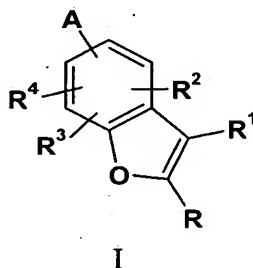
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

6. (Amended) The [A] method of [any of] Claim[s] 3[, 4, or 5] where the mammal is human.

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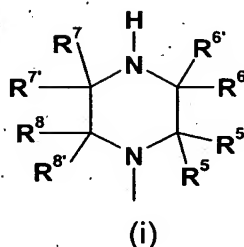
We Claim:

1. (Amended) The compounds of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethoxy, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R⁵ is hydrogen or methyl, provided that R⁵ may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁶ is hydrogen or methyl, provided that R⁶ may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^7 is hydrogen or methyl, provided that $R^{7'}$ may be methyl only when R^7 is other than hydrogen; or R^7 and $R^{7'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^8 is hydrogen or methyl, provided that $R^{8'}$ may be methyl only when R^8 is other than hydrogen; or R^8 and $R^{8'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^9 is C_1 - C_8 alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C_1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

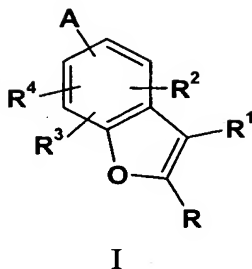
1. R is halo;
2. R^1 is halo or phenyl
3. R^6 or R^7 is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

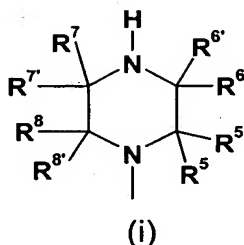
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

2. (Amended) A pharmaceutical formulation which comprises, in association with a pharmaceutically acceptable carrier, diluent or excipient, a compound of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

$R^{8'}$ is hydrogen or methyl, provided that $R^{8'}$ may be methyl only when R^8 is other than hydrogen; or R^8 and $R^{8'}$, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^9 is C_1 - C_8 alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C_1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

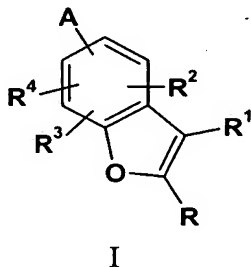
1. R is halo;
2. R^1 is halo or phenyl
3. $R^{6'}$ or $R^{7'}$ is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

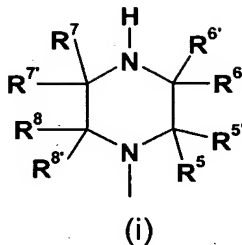
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

3. (Amended) A method for increasing activation of the 5-HT_{2C} receptor in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compounds of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C^1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

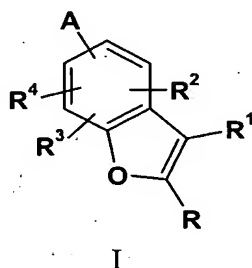
1. R is halo;
2. R^1 is halo or phenyl
3. R^6 or R^7 is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R, R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

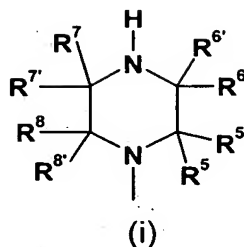
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

4. (Amended) A method for the treatment of obesity in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compound of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R⁵ is hydrogen or methyl, provided that R⁵ may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁶ is hydrogen or methyl, provided that R⁶ may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁷ is hydrogen or methyl, provided that R⁷ may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁸ is hydrogen or methyl, provided that R⁸ may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R^2 , R^3 , and R^4 are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C^1 - C_4 alkoxy, or C_1 - C_4 alkyl, neither R^6 nor R^7 may be selected from the group consisting of hydrogen and C_1 - C_6 alkyl unless:

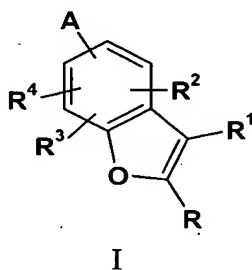
1. R is halo;
2. R^1 is halo or phenyl
3. R^6 or R^7 is methyl; or
4. R^5 or R^8 are other than hydrogen;

b) when R, R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;

c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and

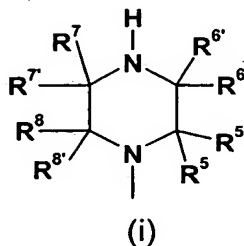
d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

5. (Amended) A method for the treatment of depression in mammals, comprising administering to a mammal in need of such activation a pharmaceutically effective amount of a compound of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C₁-C₆ alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷ and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R⁵ is hydrogen or methyl, provided that R⁵ may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁶ is hydrogen or methyl, provided that R⁶ may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁷ is hydrogen or methyl, provided that R⁷ may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁸ is hydrogen or methyl, provided that R⁸ may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R², R³, and R⁴ are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C₁-C₄ alkoxy, or C₁-C₄ alkyl, neither R⁶ nor R⁷ may be selected from the group consisting of hydrogen and C₁-C₆ alkyl unless:

1. R is halo;
2. R¹ is halo or phenyl
3. R⁶ or R⁷ is methyl; or

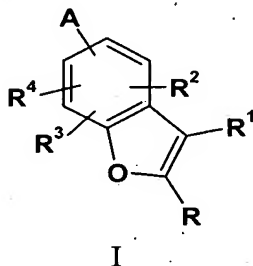
4. R^5 or R^8 are other than hydrogen;
- b) when R , R^1 , and two of R^2 , R^3 , and R^4 are hydrogen and one of R^2 , R^3 , or R^4 is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R^5 , R^6 , R^7 , or R^8 must be other than hydrogen;
- c) when R^1 is bromo or R is methyl, at least one of R^2 , R^3 , and R^4 must be other than hydrogen; and
- d) no more than two of R^5 , R^6 , R^7 , and R^8 may be other than hydrogen.

6. (Amended) The method of Claim 3 where the mammal is human.

7. (new) The method of Claim 4 where the mammal is human.

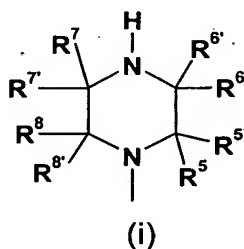
8. (new) The method of Claim 5 where the mammal is human.

9. (new) A method for the treatment of obsessive compulsive disorder in mammals, comprising administering to a mammal in need of such treatment an effective amount of a compound of Formula I:



where:

A is a piperazine of formula:



R is hydrogen, halo, trifluoromethyl or C_1 - C_6 alkyl;

R¹ is hydrogen, halo, trifluoromethyl, phenyl, or C₁-C₆ alkyl;

R², R³, and R⁴ are independently hydrogen, halo, dihalomethyl, trifluoromethyl, 1,1-difluoroethyl, cyano, C₁-C₄ alkoxy, C₁-C₄ alkoxycarbonyl, C₁-C₆ alkyl, C₁-C₆ alkyl, -C(O)NHR⁹, or C₁-C₆ alkyl substituted with a substituent selected from the group consisting of halo, C₁-C₄ alkoxy and hydroxy;

R⁵, R⁶, R⁷, and R⁸ are independently hydrogen, C₁-C₆ alkyl, phenyl, benzyl, hydroxymethyl, halomethyl, dihalomethyl, trihalomethyl, or benzyloxymethyl;

R^{5'} is hydrogen or methyl, provided that R^{5'} may be methyl only when R⁵ is other than hydrogen; or R⁵ and R^{5'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{6'} is hydrogen or methyl, provided that R^{6'} may be methyl only when R⁶ is other than hydrogen; or R⁶ and R^{6'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{7'} is hydrogen or methyl, provided that R^{7'} may be methyl only when R⁷ is other than hydrogen; or R⁷ and R^{7'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R^{8'} is hydrogen or methyl, provided that R^{8'} may be methyl only when R⁸ is other than hydrogen; or R⁸ and R^{8'}, together with the carbon atom to which they are attached, form a cyclopropyl moiety;

R⁹ is C₁-C₈ alkyl where the alkyl chain is optionally substituted with a substituent selected from the group consisting of phenyl and pyridyl;

or pharmaceutically acceptable acid addition salts thereof subject to the following provisos:

a) when R², R³, and R⁴ are all selected from the group consisting of hydrogen, trifluoromethyl, cyano, C₁-C₄ alkoxy, or C₁-C₄ alkyl, neither R⁶ nor R⁷ may be selected from the group consisting of hydrogen and C₁-C₆ alkyl unless:

1. R is halo;
2. R¹ is halo or phenyl
3. R^{6'} or R^{7'} is methyl; or
4. R⁵ or R⁸ are other than hydrogen;

b) when R, R¹, and two of R², R³, and R⁴ are hydrogen and one of R², R³, or R⁴ is selected from the group consisting of fluoro, chloro, bromo, methyl, or methoxy, at least one of R⁵, R⁶, R⁷, or R⁸ must be other than hydrogen;

c) when R¹ is bromo or R is methyl, at least one of R², R³, and R⁴ must be other than hydrogen; and

d) no more than two of R⁵, R⁶, R⁷, and R⁸ may be other than hydrogen.

10. (new) The method of Claim 9 where the mammal is human.

11. (New) A compound of Claim 1 where A is attached at either the 4- or 7-position of the benzofuran nucleus.

12. (New) A compound of Claim 11 where A is attached at the 7-position of the benzofuran nucleus.

13. (New) A compound according to Claim 12 where R², R³, R⁴ are selected from the group consisting of hydrogen, halo, difluoromethyl, or trifluoromethyl.

14. (New) A compound according to Claim 12 where one of R⁵, R⁶, R⁷, and R⁸ is other than hydrogen and the substituent is in the S configuration, and R^{5'}, R^{6'}, R^{7'}, and R^{8'} are each hydrogen.

15. (New) A compound according to Claim 12 where R⁵ is other than hydrogen, R^{5'} is methyl, and R⁶, R^{6'}, R⁷, R^{7'}, R⁸, and R^{8'} are each hydrogen.

16. (New) A compound according to Claim 12 where R⁵ and R⁶ are each other than hydrogen and are in the cis configuration with regard to each other, and R^{5'}, R^{6'}, R⁷, R^{7'}, R⁸, and R^{8'} are each hydrogen.

17. (New) A compound according to Claim 12 where R⁵ and R⁷ are each other than hydrogen, and R^{5'}, R⁶, R^{6'}, R^{7'}, R⁸, and R^{8'} are each hydrogen.